

LIMITED WARRANTY

This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, TRANSPORTATION CHARGES PREPAID. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

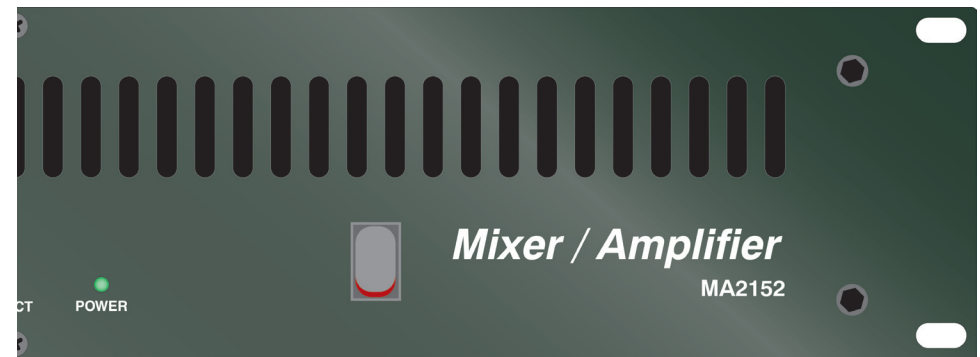
This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

This one-year warranty is in lieu of all expressed warranties, obligations or liabilities. ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

ROLLS

MA2152 Mixer / Amplifier



ROLLS

ROLLS CORPORATION
SALT LAKE CITY, UTAH
1/04

OWNERS MANUAL

INTRODUCTION

Thank you for your purchase of the Rolls MA2152 Mixer / Amplifier. The MA2152 is a two rack space mixer amplifier designed for restaurants, schools, churches, clubs etc. The unit provides a compact and efficient way to mix up to three sources such as AM/FM tuners, CD players, and video players with up to two microphones. Priority talkover is provided on Microphone Two for paging, and on Source One for a jukebox, telephone, etc. The power output section may be connected to 8, or 16 ohm speakers, or a 25V or 70V system.

NOTE: THIS MANUAL ASSUMES THE USER HAS A WORKING KNOWLEDGE OF AUDIO ELECTRONICS, BALANCED AND UNBALANCED CONNECTIONS, AND PROPER SIGNAL LEVEL SETTING.

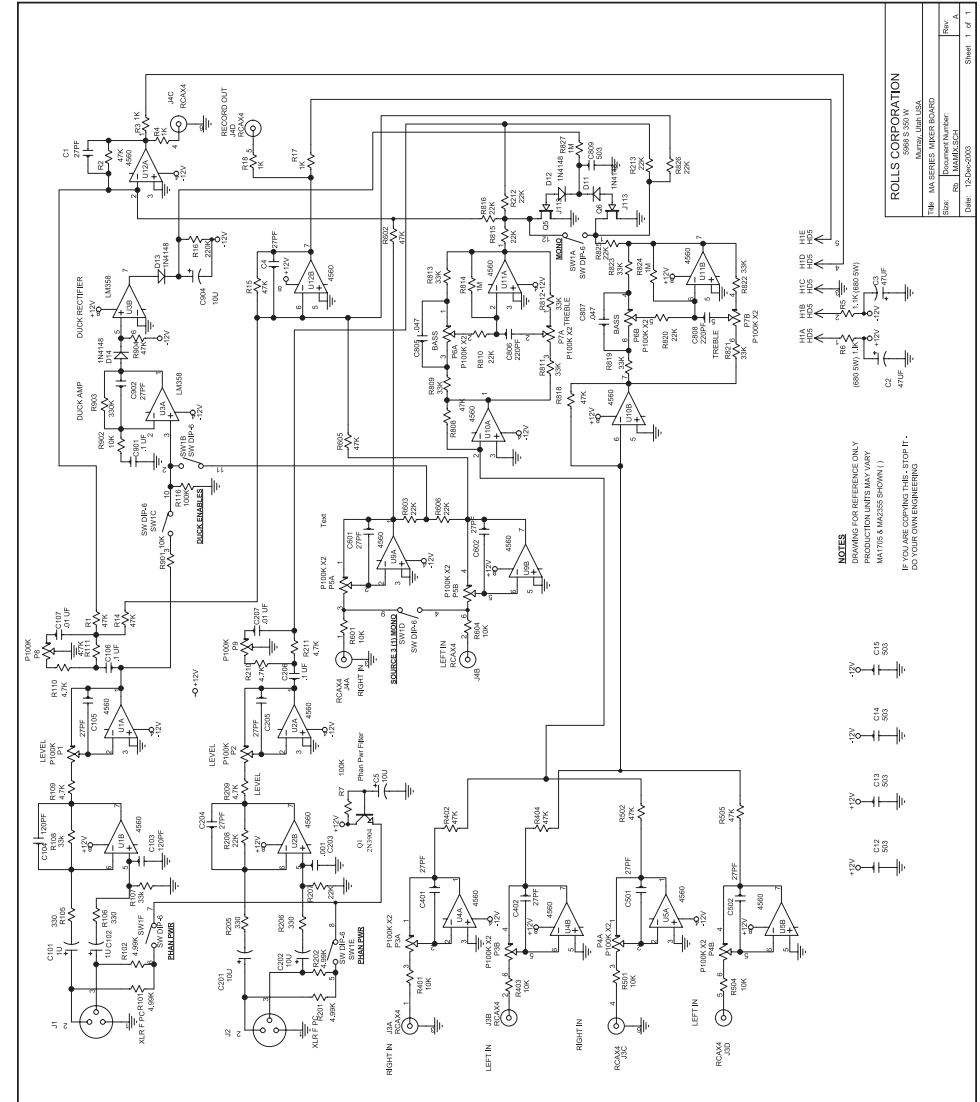
INSPECTION

1. Unpack and inspect the MA2152 box and package. If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.
2. Please visit our website at www.rolls.com and click on the Register Your Warranty Here button, or complete the Warranty Registration Card and return it to the factory.

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MIXER SECTION



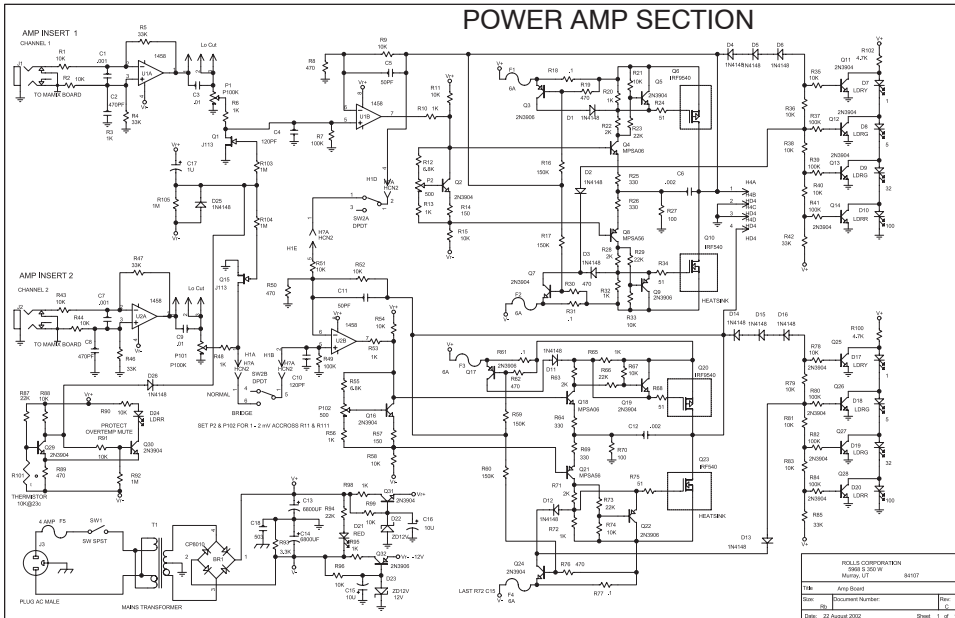
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 Date: 12/06/00

SPECIFICATIONS

MIXER

Input Impedance:	Mic:	600 Ohms XLR balanced
	Source:	22K Ohms RCA
	Insert:	22K Ohms 1/4" TS unbal.
Max Input Level:	Mic:	-14 dBV Mic level Max
	Source:	24 dBV
	Insert:	24 dBV
Connectors:		2: XLR, 8: Stereo RCA, 3: 1/4" TRS,
		4: 5-way binding posts
Phantom Power:		+12 VDC
Max Gain:	Mic:	60 dBV
	Source:	26 dBV
Tone Controls:		+/-12 dB 100 Hz Bass
		+/-12 dB 11kHz Treble
Noise Floor:		Speaker out: -67 dBV
		Pre Out: -90 dBV
S/N Ratio:		96 dBV
Priority Attenuation:		60 dBV
POWER AMP		
Power Output, Stereo:		100 Watts RMS/Ch. 4 Ohms (Both channels driven)
		70 Watts RMS/Ch. 8 Ohms
Bridged:		200 Watts RMS - 8 Ohms/70V
Output Matching:		4, 8, 16 Ohms, 25V Stereo, 70V Mono
THD:		<.08%, (1 kHz @ 1 Watt)
Outputs:		RCA Record Out, 5-Way binding post Power Amp Outputs
Power Bandwidth:		60 Hz - 30 kHz, +/- 1 dB
Damping Factor:		> 150
Slew Rate:		100 Volts/microSecond
Phase Shift:		<10 Deg., 20 Hz - 20 kHz
Power:		120 VAC, 60 Hz 2.5A
Size:		19" x 3.5" x 7.5" (48 x 9 x 19 cm)
Weight:		12 lbs (5.5 kg)

SCHEMATIC



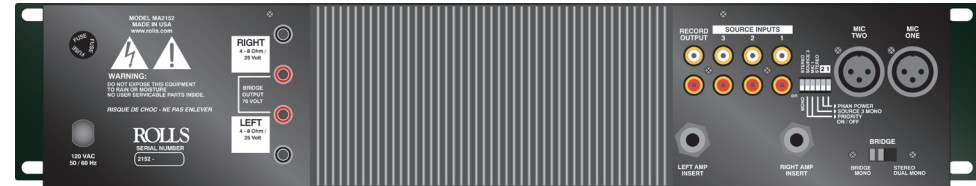
DESCRIPTION

FRONT PANEL



Mic 1, 2: Adjust the level of signal from the corresponding Mic Input.
TONE 1, 2: Adjusts the frequency content of the microphone signal in the channel. When the control is turned counter-clockwise, the high frequencies are cut, when the control is turned clockwise, the low frequencies are cut.
Source 1 - 3: Adjust the volume of input from the RCA Source Inputs.
Bass: Adjusts the low frequencies of the Source 1 and 2 signals only.
Treble: Adjusts the high frequencies of the Source 1 and 2 signals only.
Left / Right Output: Adjusts that channel's output level
Clip. LED indicating clipping in the MA2152 amplifier.
Power: LED indicating power is applied to the MA2152 and the unit is on.

REAR PANEL



FUSE: 4 Amp fuse.
4 - 8 Ohm / 25 Volt Output: The two red banana jacks are used when the MA2152 is in Bridge/Mono, or 70V mode.

RECORD OUT: Stereo RCA jacks, contains all mixed signals before the Master Level controls.
SOURCE INPUTS: Stereo RCA jacks, Channels 1 - 3, for connection to stereo sources such as AM/FM tuners, cassette players, cd players, or video players.
LEFT/RIGHT AMP INSERT: 1/4" Tip-Send, Ring-Return insert jack.
DIP SWITCH: Contains the small switches for engaging Mic 1, 2 phantom power, Source 3 Stereo or Mono, the priority (Talk Over) functions, and the Mono/Stereo select.
MICROPHONE ONE and TWO: Balanced XLR inputs to be connected to dynamic or condenser microphones.
BRIDGE SWITCH: This switch selects the output configuration; Bridge Mono, or Stereo / Dual Mono.

Inputs

Connect low impedance microphones to the Mic inputs. If a paging microphone is being used, connect it to Mic Input 1 so it may be used with the Talk Over function. Connect source signals such as CD players, cassette players or video players to the RCA Source Inputs. If a jukebox is being connected, and you want its signal to mute the other source signals, connect it to Source input 1.

For recording purposes, connect a stereo RCA cable to the Record Out jacks, and to your recording device.

Amp Inserts

To connect a signal processor to the MA2152 signal(s), use an insert plug, or cable wired as shown in Fig. 1. This return signal is then sent to the output level section of the amplifier.

Outputs

In STEREO MODE, the Right speaker is connected to the red and black banana RIGHT OUTPUT connectors. The Left speaker is connected to the red and black banana LEFT OUTPUT connectors. Impedances should be no less than 4 Ohms. In BRIDGE MONO MODE, the speakers are connected to the two red BRIDGE OUTPUT connectors.

Connect the MA2152 to a properly grounded AC outlet. There is a one second turn-on delay provided to prevent possible speaker damage in case all equipment is on a single power strip.

BRIDGING

To bridge the MA2152 outputs together, first ensure the power is off. Move the BRIDGE switch to the "Bridge" position, and set the STEREO/MONO DIP Switch (details on the next page), to MONO. The Channel 1 Volume control will be the master volume - Channel 2 is inactive. Connect the load (speakers) to the two positive (red) banana jacks. Make no connections to the black posts. The level meters will both light, and the output power into 8 Ohms is the sum of the LEDs that light.

DRIVING 25 OR 70 VOLT LINES

The MA2152 will drive 25 or 70 Volt lines directly with no added transformers when used the following way:

- Each channel (used individually) will drive 25 Volt lines directly.
- A single 70 Volt line bay be driven when the MA2152 is in Bridged Mode. In order to drive two 70 Volt lines, two 8 Ohms to 70 Volt conversion transformers will be needed.

DIP SWITCH SETTINGS (From left to right)

- If a microphone requires phantom power, move the Mic channel's corresponding PHANTOM POWER switch to the up position. This applies 12 volts dc phantom power to the indicated microphone.
- SOURCE 1 MONO; this switch sums the Right and Left inputs of Source 1 to mixed dual-mono inputs.
- Mic 1 Priority; when in the up position, all program material on Mic 2 and Sources 2 and 3 will be "ducked" or muted when a signal is present at Mic 1. Source 3 is left un-muted. This function is used for paging.
- Source 3 Priority: when in the up position, Source 1, and 2 will be "ducked" or muted by the signals at Source 1. This function is for jukebox priority. With a jukebox connected to Source input 1, and the Talkover switch 2 on, the other Source input signals such as background music, will be muted and only the jukebox will be heard.
- MONO / STEREO: When down, the output of the MA2152 is summed to mono. Either jack can be used as a mono output.

FAULT PROTECTION

The fault protection in the MA2152 limits the current to the output stage. This mode is entered whenever the output stage is called upon for too much power, it may also be fooled by impedances lower than four ohms - which may cause the output stage to overheat and be irreversably damaged.

Since the MA2152 is convection cooled, the unit radiates heat from the front panel and, depending on the load demand, it may become very hot if drawn upon heavily.

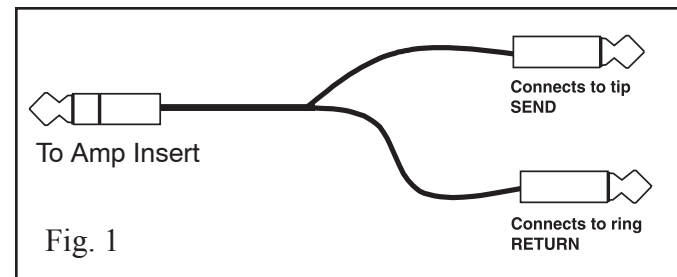


Fig. 1